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CONFERENCE ON DISARMAMENT

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WORKING PAPER

FRANCE

PREVENTION OF AN ARMS RACE IN SPACE:
MEASURES TO PROMOTE CONFIDENCE AND
TRANSPARENCY

In its arms control and disarmament plan of 3 June 1991 (CD/1079), France reaffirmed the need for "the development of **outer-space confidence-building measures** in the form of a 'code of conduct' for civilian and military satellites". In addition, it proposed the establishment of **regional agencies responsible for transparency**, which could receive and use satellite images in the context of regional agreements on confidence and security.

The objectives to which these proposals are directed are well known. They underlay the French memorandum on the military uses of space submitted to the Conference on Disarmament on 14 April 1983 (CD/375). This memorandum related to the progressive development of a stable and clear space regime, by means of the strengthening of the existing system of information on space objects and promotion of the principle of immunity granted to certain space objects. France, which upholds its 1978 proposal for an international satellite monitoring agency (ISMA) and its 1988 proposal for a satellite image processing agency (SIPA), is convinced that a regional approach to the use of satellite images could make a decisive contribution to strengthening confidence and security.

The procedure proposed by France would, in its view, enhance the security of peaceful activities in space (and indirectly prevent the use of space for

aggressive purposes), while at the same time, by harnessing space for the purpose of confidence and security, facilitating access to space by all interested States and promoting cooperation in space for civilian and scientific purposes.

I - CONFIDENCE-BUILDING MEASURES IN SPACE

In France's view, any legal regime for promoting confidence must be based on the principle of **non-interference** with non-aggressive activities in space, the strengthening of the 1975 Convention on the **registration** of space objects and the drawing up of a **"code of conduct in space"**, which might be complemented by measures to provide information on the occasion of the **launching** of space objects.

1 - The principle of non-interference

With the rise in the quantity of orbiting space objects and the number of space Powers, as well as potentially dangerous technological capabilities, the risks to security in space activities increase. France considers that the time has come to lay down a more reliable regime for satellites in orbit.

As has been shown by the discussions in the Ad Hoc Committee on the Prevention of an Arms Race in Outer Space, one of the essential concerns is that of how to protect satellites which merit protection. Consequently, France wishes to propose a **criterion whereby a satellite is or is not protected depending on its aggressive capacity**. In this way, a satellite possessing a capability for active interference would enjoy no protection.

On the model of the immunity mutually granted by the two main space Powers to their "national means of verification" of their bilateral disarmament agreements (in view of the fact that these space facilities play a stabilizing function), France considers that the principle of non-interference would constitute a first step towards **internationally recognized immunity** of satellites. Within the Ad Hoc Committee on the Prevention of an Arms Race in Outer Space, the discussion might focus, first, on the **technical parameters** to be used to determine a satellite's capability for active interference, and, second, the possible **juridical formulation** of the principle of non-interference.

2 - Strengthening of the 1975 Convention on the registration of space objects

The 1975 registration Convention, which was initially designed as a way of facilitating the application of the 1972 Convention on International Liability for Damage Caused by Space Objects, offers considerable potential

for enhancing the transparency of space activities, which is vital for any regime to promote confidence. Currently, the register set up under article IV requires only the following information concerning each space object:

- Name of launching State;
- Registration number;
- Date and location of launch;
- Basic orbital parameters (nodal period, inclination, etc.);
- General function of the space object.

In order to enhance knowledge of spacecraft, and in particular to clarify responsibilities in the event of an incident, France proposes that the register should also include the following information:

- The orbital characteristics of each satellite;
- Details of its manoeuvrability;
- Information on energy sources available on board;
- Certain other functional characteristics (mass, size, expected life of the space vehicle).

This could give concrete form to the possibility - provided for in article IV, paragraph 2 of the Convention - of furnishing the United Nations Secretary-General with additional information relating to the space object. In France's view, this broadening of the scope of the register should be effected on a voluntary, negotiated basis among the States parties. This would be in keeping with the proposals already made, inter alia, by Australia and Canada in 1988 (CD/OS/WP.25), Poland in 1989 (CD/OS/WP.38) and Argentina in 1990 (CD/1015 - CD/OS/WP.42), as well as the Federal Republic of Germany (Ad Hoc Committee, 17 July 1990). The latter proposed in particular that further information should be added to the register (authority responsible for launch and control, presence or absence of weapons on board). France stands ready to give favourable consideration to adding these details to the registration Convention, as well as the possibility of informing the United Nations Secretary-General of launch forecasts.

Furthermore, since experience to date has been unsatisfactory, France calls upon the States parties to reduce the time taken to notify the Secretary-General of information and to update such information regularly. Lastly, it seeks an increase in the number of States parties to the Convention.

3 - Rules of behaviour

The aim of a "**code of conduct**", as advocated by France (CD/937) and by Germany (CD/PV.345 and 516), is to guarantee the security of space activities while preventing the use of space for aggressive purposes. From the viewpoint of the prevention of an arms race, what is most important is to be able at any time to distinguish an incident of fortuitous or accidental origin from the result of specific aggression. To that end, it is suggested that a set of rules of behaviour should be drawn up, which might include:

- an obligation to **regularly update orbital parameters** declared at the time of registration, to take account of manoeuvres and drift;
- respecting **minimum distances** between two satellites placed in the same orbit (in order to avoid not only accidental collisions but also short-range co-orbital tracking, which is a precondition for the system of space mines);
- monitoring of **short-range intersections** (also to limit risks of collision or interference).

Combined with a strengthened registration procedure, such a set of rules should provide better information on a continuous basis concerning potential threats to each satellite, and prevent aggression by making it impossible for such aggression to go unpunished because of failure to determine its precise origin. These rules might be supplemented by:

- the above-mentioned measure relating to **information on launches scheduled** by States;
- a procedure providing for **requests for explanations** in the event of an incident or suspicious activities;
- the identification of **keep-out zones** in the form of two spherical zones moving with each satellite:
  - a **proximity** zone to delimit the location of each space object in orbit, as well as the capabilities of each object to move with respect to the others;
  - a wider **approach** zone, with obligatory notification for passage through it.

4 - Measures to provide information on the occasion of the launching of space objects

In 1989, Poland suggested (CD/OS/WP.38) that it would be useful, in the field of the prevention of an arms race in outer space, to draw on experience

built up in the application of confidence-building and security-building measures by the States participating in CSCE. Specifically, Poland proposed measures for the exchange of information and observations on the occasion of launches of space objects. France stands ready to give favourable consideration to a measure providing for **assessment visits** at the launch site or orbital control site of a registered space object. It is aware of the possible difficulties or objections that such a measure might prompt, and considers that such visits should take place on a voluntary basis: only a State which had expressly agreed to such an inspection could be visited.

Hence France proposes that the Ad Hoc Committee on the Prevention of an Arms Race in Outer Space should give thought to the circumstances in which such measures might be feasible, drawing on experience accumulated within the CSCE framework.

II - SPACE AND TRANSPARENCY

As the French arms control and disarmament plan states, "information is the prime condition of confidence". In order to allow the smooth operation of a system of confidence-building measures in space, France proposed in 1989 (CD/937) the establishment of a **centralized trajectography system**. Moreover, as the potential contribution of satellite images in the implementation of regional agreements on security and confidence is increasingly widely recognized, France proposes the establishment of **regional agencies responsible for transparency**.

A - The international trajectography centre (UNITRACE)

Compliance with and effective application of the broadened rules for registration and the rules of behaviour that would be drawn up under a regime of confidence-building measures imply the establishment of an international management tool with the function of accumulating all the information gathered and making it available to satellite managers. It would be designed to alert the States concerned in the event of threatened incidents and to supply evidence of good or bad faith in the event of an incident (which would minimize the risk of international disputes), and it should meet the requirement of transparency and be in permanent possession of updated information concerning the trajectories of space objects.

At the same time, if it is to be acceptable to satellite-owning States, such a centre must observe a degree of confidentiality in respect of military

activities in space. Under the auspices of the United Nations Secretariat, it would have the following functions:

collection of data for updating registrations;

monitoring of space objects;

real time calculation of all available trajectories.

It would keep the information without distributing it and would alert only the State or States concerned where necessary.

The proposal recently put forward by Canada (CD/1088) whereby all space objects would be equipped with beacons to enable them to be identified at all times deserves thorough study, since, if it was proved to be feasible, it might considerably facilitate the task of an international trajectography centre.

B - Regional agencies responsible for transparency

France has long considered that the pooling of information gathered by satellites can make an effective contribution to transparency, which is itself a vital component of security. This was the objective France sought when it proposed to the United Nations in 1978 an international satellite monitoring agency (ISMA), and in 1988 a satellite image processing agency (SIPA). Noting that the regional approach to disarmament and security is increasingly widely recognized as essential by the international community, France considers that the implementation of regional agreements on confidence and security could draw to an increasing extent on the use of satellite images. This approach links up with the philosophy of the "PAXSAT-B" concept put forward by Canada in 1987 (CD/PV.410).

Taking the example of Europe, which already has experience in the application of a regional system of confidence-building and security-building measures, and which has recently strengthened the institutional machinery underpinning that system (cf. documents CD/1043: Charter of Paris for a New Europe, and CD/1070: Vienna Document on confidence- and security-building measures in Europe), it is France's wish that the existing CSCE Conflict Prevention Centre should shift towards a transparency function, in particular through the use of the data generated by an "open skies" agreement and by satellite images. It suggests that the other regions should make provision for the use of such machinery under regional agreements on confidence and security.

France itself, which is convinced that improved information can enhance security, is prepared to contribute to the establishment and operation of such regional agencies in three forms:

assistance in training specialists in the interpretation of satellite data;

study of the possible structure and size of the reception facilities (equipment) which might be made available to States participating in such agencies;

initiation of more far-reaching consideration of the question of access to data and satellite information and discussions with other countries producing space images, with a view to possible agreements to supply regional agencies at their request with the information they need to perform their tasks.

Discussions in the Conference on Disarmament in recent years have shown that the great and urgent need for thorough consideration of the establishment of a regime of confidence-building measures in space are increasingly recognized by the international community. Among the topics tackled by the Ad Hoc Committee on the Prevention of an Arms Race in Outer Space, it would seem that this is the topic offering the best prospects for the future. France joins other member States in hoping that its contribution will contribute to progress towards a consensus in this field.

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